

New and rare lichen records from the Central Siberian Biosphere Reserve (Krasnoyarsk Krai, Russia)

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Abstract: 19 species of lichens and allied fungi are recorded from Central Siberian Biosphere Reserve (Middle Yenisey River, Krasnoyarsk Krai, Russia). *Bacidia rosellizans* and *Catinaria neuschildii* are new to Asia; *Caloplaca concilians* and *Rimularia furvella* are new to the Asian Part of Russia; *Chaenothecopsis epithallina* and *C. nigra* are new to Siberia.

Kokkuvõte: Uute ja haruldaste samblike leiud Kesk-Siberi biosfääri kaitsealalt (Krasnojarski krai, Venemaa)

Kesk-Siberi biosfääri kaitsealalt (Jenissei jõe keskjooks, Krasnojarski krai, Venemaa) teatatakse 19 sambliku ja nendega seotud seene leidudest. *Bacidia rosellizans* ja *Catinaria neuschildii* on esmasleiud Aasias; *Caloplaca concilians* and *Rimularia furvella* on uued leiud Venemaa Aasia-osas ning *Chaenothecopsis epithallina* ja *C. nigra* on uued Siberile.

INTRODUCTION

Central Siberian Biosphere Reserve is situated in East Siberia, Krasnoyarsk Krai, within Turukhanskiy and Evenkiyskiy Districts, at the middle reaches of the Yenisey River, near the mouth of the Podkamennaya Tunguska River, at 61°40'–62°50' N, 88°30'–92°10' E (Fig. 1).

No studies on the lichen flora at Central Siberian Reserve have been carried out earlier. However, close to the territory of the Reserve, macrolichens have been investigated in more detail (Kuvajev et al., 1999). Other lichenological explorations have been conducted several hun-

dreds kilometers from the Reserve (Zhurbenko, 1989, 1992; Dobrysch, 1999; Sedelnikova, 2008). In addition, in 1876 lichens were collected by M. Brenner at the middle and lower reaches of the Yenisey River; these collections are mainly kept in herbaria H and S.

Central Siberian Biosphere Reserve is situated at the joint of the West Siberian Plain and Central Siberian Tableland, with hilly plains predominating in the west. In the east the relief is more rugged: flat watersheds 200–300 meters in altitude alternate with deep fluvial valleys. On

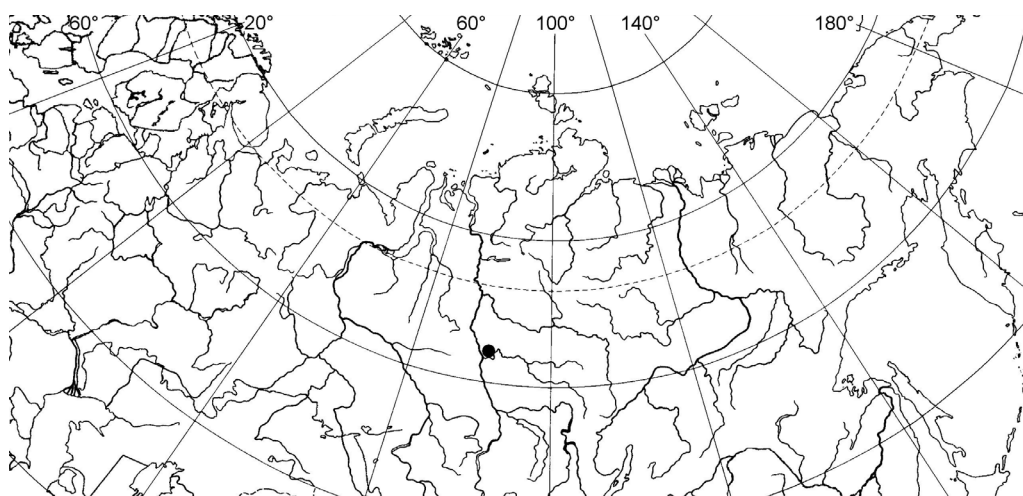


Fig. 1. Location of Central Siberian Biosphere Reserve in Krasnoyarsk Krai, Russia.

the flanks of the valleys vertical rocks of different mineral composition occur.

The investigated area is situated in the Middle Taiga subzone. Zonal vegetation presented by boreal forests mainly with *Picea obovata* Ledeb., *Pinus sibirica* Du Tour and *Abies sibirica* Ledeb. This territory is sparsely populated, with almost no human activity.

MATERIALS AND METHODS

The field work was carried out by the author in different parts of the Central Siberian Biosphere Reserve: in its western part (the Yenisey River banks) and the eastern part (the Podkamennaya Tunguska River banks and the Stolbovaya River basin) in August 2008 and July 2009. Part of the collected material is kept in LE, other specimens are kept in personal collection of the author.

RESULTS

Altogether 222 species of lichens and allied fungi have been recorded from Central Siberian Biosphere Reserve by the present time. The detailed data are presented below for the 19 most interesting records. *Bacidia rosellizans* and *Catinaria neuschildii* are new to Asia; *Caloplaca concilians* and *Rimularia furvella* is new to the Asian Part of Russia; *Chaenothecopsis epithallina* and *C. nigra* are new to Siberia.

List of species

ARTHONIA PATELLULATA Nyl. – The Lower Talimakit River, 62°30'14.9"N, 91°29'58.1"E, mixed forest, on bark of *Populus tremula*, 18 Aug 2008 (LE).

ASPICILIA DESERTORUM (Kremp.) Mereschk. – The Lower Kulinna River, 62°09'16.9"N, 91°12'35.9"E, sheer rocks with west exposition on the right bank of the River, on weakly carbonaceous stones, 14 July 2009 (LE). This is an aride species; in Russia distributed mainly in southern droughty regions. This is the northernmost record of the species in the world.

BACIDIA ROSELLIZANS S. Ekman – Near the mouth of the Stolbovaya River, 62°07'09.4"N, 91°28'02.4"E, aspen forest, on bark of *Populus tremula*, 16 July 2009 (LE). New to Asia. This species was described only recently (Ekman, 2009). Differs from *B. rosella* (Pers.) De Not. by lighter, whitish to pale gray, and thinner thallus,

smaller apothecia with thinner margin, shorter and narrower ascospores (41–58 × 1.9–2.4 µm) with 7–10 septa (*B. rosella* has spores with 15–19 septa), longer and more septate conidia and more northern distribution. *B. rosella* is a nemoral species while *B. rosellizans* is related to taiga zone. In Russia formerly known from North Ural (Komi Republic) only. Also known from Central Sweden, USA (Michigan) and Canada (Ontario) (Ekman, 2009).

CALOPLACA CONCILIANS (Nyl.) H. Olivier – Near the mouth of the Stolbovaya River, 62°07'24.9"N, 91°31'09.8"E, open sandstones among water meadow on the right bank of the Podkamennaya Tunguska River, on stones, 17 July 2009. New to the Asian Part of Russia. In Russia formerly known from Novaya Zemlya only (Andreev et al., 1996). In Asia formerly known from Turkey (Güvenç et al., 2006).

C. DIPHYODES (Nyl.) Jatta – The Lower Talimakit River, 62°29'35.5"N, 91°30'15.6"E, large boulders on the left bank of the river among water meadow, on stones, 17 Aug 2008.

CATINARIA NEUSCHILDI (Körb.) P. James – The right bank of the Yenisey River across the Northern extremity of the Komsinskiy Isle, 61°53' N, 89°20' E, fir forest on the steep slope with southwest exposition, on wood of a fallen tree, 7 July 2009 (LE). New to Asia. In Russia formerly known from Murmansk and Leningrad Regions and Komi Republic (Hermansson et al., 2006; Kuznetsova et al., 2007; Urbanavichus et al., 2008).

CHAENOTHECOPSIS EPITHALLINA Tibell – The Lower Stolbovaya River, 62°08'52.9"N, 91°25'38.3"E, mixed forest, on thallus of *Chaenotheca trichialis* (Ach.) Th. Fr. on wood of a dead standing tree, 16 July 2009 (LE). New to Siberia. In Russia formerly known from the European part (Leningrad and Nizhniy Novgorod Regions, Karelia and Komi Republics) and Far East (Khabarovsk Krai, Kamchatka) (Titov, 2006).

C. NIGRA Tibell – The banks of the Kulinna River lower than mouth of the Ussas River, 62°09'17.2"N, 91°10'01.9"E, larch-fir grassy forest with undergrowth near the brook, on rotten partly burnt wood of a stump, 14 July 2009 (LE). New to Siberia. In Russia formerly known from European part (Murmansk, Yaro-

slavl, Ryazan, Kaliningrad Regions, Karelia and Komi Republics) and Far East (Sakhalin) (Titov, 2006; Dedkov et al., 2007; Fadeeva et al., 2007; Muchnik et al., 2007; Urbanavichus et al., 2008; Zhdanov & Volosnova, 2009).

HETERODERMIA JAPONICA (M. Satô) Swinscow & Krog – Near the mouth of the Stolbovaya River, 62°07'27.3"N, 91°31'05.2"E, pine forest on the steep slope with southeast exposition, on bark of *Populus tremula*, 14 Aug 2008; near Bor, the left bank of the Yenisey River, 61°34'32.6" N, 90°07'23.1" E, flooded deciduous large-grassy forest, on bark of *Sorbus aucuparia*, 10 July 2009 (outside of the Nature Reserve Territory); near the mouth of the Stolbovaya River, 62°07'09.4"N, 91°28'02.4"E, aspen forest, on bark of *Populus tremula*, 16 July 2009 (LE).

LECANORA PRUINOSA Chaub. – The banks of the Kulinna River upper than mouth of the Ussas River, 62°11'00.1"N, 91°07'07.5"E, sheer carbonaceous rocks with north exposition among sparse forest, on carbonaceous stones, 13 July 2009.

LECIDEA POLYCOCCA Sommerf. – Near the mouth of the Stolbovaya River, 62°07'56.4"N, 91°32'09.8"E, carbonaceous pebbles among dry pine forest on the steep slope with southeast exposition, on carbonaceous stones, 18 July 2009 (LE).

LOBOTHALLIA RADIOSA (Hoffm.) Hafellner – The Lower Kulinna River, 62°09'16.9"N, 91°12'35.9"E, sheer rocks with west exposition on the right bank of the River, on weakly carbonaceous stones, 14 July 2009 (LE).

MYCOBLASTUS FUCATUS (Stirt.) Zahlbr. – Near the mouth of the Stolbovaya River, 62°07'25.3"N, 91°30'26.2"E, fir forest on the steep slope with southeast exposition, on rotten wood of fallen tree, 17 July 2009 (LE).

PHAEOPHYSCIA PRIMARIA (Poelt) Trass – Near the mouth of the Stolbovaya River, 62°07'27.2"N, 91°28'10.6"E, sheer rocks with northeast exposition on the right bank of the Stolbovaya River, on mosses over stones, 21 Aug 2008.

PSORA TESTACEA (Hoffm.) Ach. – Near the mouth of the Stolbovaya River, 62°07'35.0"N, 91°28'05.6"E, sheer rocks with west exposition

on the left bank of the Stolbovaya River, on stones, 17 July 2009 (LE).

RHIZOCARPON AMPHIBIUM (Fr.) Th. Fr. – The Lower Kulinna River, 62°11'05.8"N, 91°15'43.9"E, crowded large boulders, on stones, 13 July 2009. In Russia formerly known from North Ural (Komi Republic) and Taimyr Peninsula (Hermansson et al., 2006; Kristinsson et al., 2006).

RIMULARIA FURVELLA (Nyl. ex Mudd) Hertel & Rambold – Near the mouth of the Stolbovaya River, 62°07'28.9"N, 91°28'22.5"E, open rocks among coniferous forest, edge of precipice with south exposition, on stones and thallus of *Rhizocarpon grande* (Flörke) Arnold and *Acarospora* sp., 15 Aug 2008. New to the Asian Part of Russia. In Russia formerly known from Murmansk, Leningrad, Lipetsk Regions and Karelia Republic (Zavarzin et al., 1999; Muchnik, 2001; Fadeeva et al., 2007; Urbanavichus et al., 2008). In Asia formerly known from Malaysia – Kalimantan Isle (Sipman, 1993).

SARCOGYNE DISTINGUENDA Th. Fr. – The Lower Ussas River, 62°13'19.4"N, 91°07'35.9"E, sheer carbonaceous rocks with west exposition on the left bank of the River, on carbonaceous stones, 13 July 2009 (LE).

VERRUCARIA LATEBROSA Körb. – The Lower Tali-makit River, 62°29'35.5"N, 91°30'15.6"E, boulders among water meadow on the left bank of the River, on stones, 17 Aug 2008 (LE).

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